

United States
Census
2000

**Updated Summary:
Census
2000
Operational
Plan**

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U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

Updated Summary: Census 2000 Operational Plan

Census 2000 will occur next year to determine how many people reside in the United States, precisely where they reside, and their demographic characteristics. Census 2000 is the nation's largest and most complex mobilization, and will include numerous critical phases, such as preparing address lists, mailing questionnaires, performing quality checks and tabulating census results.

The data gathered by Census 2000 will serve several critical purposes for American government and society. The data are used to apportion the U.S. House of Representatives among the states, draw legislative districts within each state, allocate nearly \$200 billion in annual federal funding, and provide the baseline demographic statistics for planning, implementing and evaluating the provision of federal, state and local services and private business decisions.

In January, consistent with the Congressional mandate that the Census Bureau plan two separate census tracks, the Census Bureau issued two operational plans for conducting Census 2000. The first track "Census 2000 Operational Plan" is a revised version of the Census Bureau's original plan using statistical sampling methodology for all purposes. The second track "Census 2000 Operational Plan: Using Traditional Census-Taking Methods" is the Census Bureau's plan for conducting the decennial census without using statistical sampling for purposes of apportionment.

After the Bureau completed those plans, important developments occurred. First, the Census Bureau completed more thorough evaluations of the Census 2000 Dress Rehearsals conducted in 1998 in Sacramento, CA, Menominee County, WI, and the 11 counties of and around Columbia SC. In addition, on January 25, 1999, the U.S.

Supreme Court ruled that a 1976 amendment to the Census Act bars the use of statistical sampling to correct the decennial data used to apportion seats in the U.S. House of Representatives among the states. However, the Court opinion also acknowledged that the 1976 amendment requires the use of statistical sampling for non-apportionment purposes, if it is feasible to do so.

The Census Bureau is preparing a plan designed to ensure the most accurate decennial census legally possible. The Census Bureau is continuing to refine this plan to be consistent with the decision of the Supreme Court, as well as the lessons from the Dress Rehearsals. In developing this plan, the Census Bureau has determined that it is feasible to conduct and complete the statistical procedures necessary to provide corrected data for all purposes other than apportionment within the legally mandated schedule. The Bureau also believes that such corrected data will be substantially more accurate than the raw data.

This plan includes data collection from 100 percent of households and housing units. In addition, the plan includes an extensive statistical operation to measure and correct overall and differential coverage of U.S. residents in Census 2000. This operation consists of a scientific sample of approximately 300,000 housing units, and will use regional groupings to generate corrected counts.

The Census Bureau will carry out the plan in accordance with a detailed Master Activity Schedule that catalogues the start and finish dates for the multitude of separate but interrelated activities entailed in Census 2000. The Bureau is completing development of this Master Activity Schedule. The major elements of the plan and schedule are outlined below.

A. Marketing Program

Census 2000 will include, for the first time, an integrated communications effort to increase awareness of the Decennial census and boost response rates. Because the Census Bureau will need to reach 100 percent of housing units, the marketing program has been expanded to achieve this goal. There are three phases to the marketing program: (1) Prior to Census Day, build awareness of the Census how it will benefit communities; (2) During the mailout/mailback period, motivate people to return their questionnaire promptly; and (3) During the enumerator follow-up period, encourage cooperation with census enumerators.

The comprehensive marketing program includes five major activities:

- *Partnerships:* Form partnerships between the Census Bureau and other federal agencies, state, local and tribal governments, and community-based organizations and businesses, to draw on the unique knowledge, experience expertise of these partners. The Census Bureau has already hired over 300 partnership specialists to manage these relationships and plans to hire more, and has already signed over 10,000 partnership agreements with local, city, and state governments, businesses, and community organizations.
- *Paid Advertising:* Conduct the first-ever paid advertising campaign, including a national media campaign aimed at increasing mail response, targeted advertising directed at raising mail response among historically undercounted population, and special advertising messages and campaigns targeted to hard-to-enumerate populations. Advertising will also focus on encouraging cooperation during the non-response follow-up procedures.
- *Special Methods to Encourage Mail Response:* In addition to the questionnaire, households will

receive a letter alerting people to the coming census questionnaire and a reminder postcard urging their response. In addition, all Census mailings, including the questionnaires, envelopes, motivational slogans and logos, are being designed to support and reinforce the marketing plan.

- *Media Public Relations:* Media specialists will be assigned to the regional census centers to cultivate local press contacts and respond to local media inquiries.
- *Promotion and Special Events:* A variety of special events, including parades, athletic events and public services television documentaries will be cosponsored by state, local and tribal governments and by community organizations and business to motivate people to respond.

B. The Census Questionnaires

In Census 2000, the questionnaire mailout/mailback system will be the primary means of census-taking. Because results of the Dress Rehearsal indicated that the use of a second mailing could contribute serious inaccuracies to the census count, Census will only mail one questionnaire per household. Cities, towns, and suburban areas with city-style addresses (house number and street name), and rural areas where city-style addresses are used for mail delivery will comprise the mailout/mailback areas. In areas where the addresses are predominantly non city-style, census enumerators will deliver addressed questionnaires for respondents to mail back. Every housing unit in the country will receive either the "short" form, or the "long" form.

- The Census **short form** will be delivered to approximately 83 percent of all housing units. It will allow the respondent to provide complete information for six household members and to list up to 6 additional household members (with follow-up to obtain information on these

members). The Census 2000 form will ask for information on only seven subjects (name, sex, age, relationship, Hispanic origin, and race for each household member, as well as whether the home is owned or rented).

- The Census **long form** will be delivered to a sample — approximately 17 percent — of all housing units. It will also allow respondent to list up to 12 household members. This form will include the short form questions, as well as a number of additional questions on the social, economic, financial, and physical characteristics for up to 6 household members (with follow-up for other members when needed). The Bureau will use a variable rate sampling plan to collect the long form data. This will allow for more efficient allocation of the sample and will maintain the accuracy and reliability of census data at small geographic levels, while reducing respondent burden.

The questionnaires collect data the nation needs to meet the statutory data requirements of the federal agencies and to administer state, local, and tribal government programs. The process began with an evaluation of the questions used in 1990. All federal agencies were asked to identify programs required by law to use census data. Non-federal requirements were obtained by a survey directed to a broad spectrum of data users, such as state, local, and tribal governments; ethnic and community organizations, the business sector; academic researchers and librarians; religious groups; and the public. Two extensive tests were conducted in 1996 to evaluate the proposed questions, and the Bureau conducted a wide range of focus groups and cognitive research. On March 31, 1997, as required by law, the Bureau submitted to the Congress the list of subjects planned for inclusion in the short and long forms, and on March 30, 1998, submitted to the Congress the actual questions.

In addition to carefully formulating the questions, the Bureau has made a number of other improvements to the forms to increase the mail response in Census 2000, and to improve the accuracy of the information collected:

- *Respondent-friendly format:* The Bureau worked with private sector designers to design forms that are easier to understand, explain why the question is being asked, and are simple to complete and mail back. Graphic icons, color contrasts, navigational aids, better grouping of questions, and more accessible instructions, are some of the improvements over the forms used in 1990.
- *Multiple mail contacts:* The Bureau's research has shown that multiple mail contacts with respondents will increase the response rate. In Census 2000 respondents will receive an advance letter alerting them that the form is coming, and a later post card reminding them to mail the questionnaire if they have not done so.
- *Questionnaires in other languages:* Forms will be mailed in five other languages (Chinese, Korean, Spanish, Tagalog, and Vietnamese) to households who request them in response to the advance letter. In addition, questionnaire assistance booklets will be available in over 30 languages.
- *Special forms:* Special forms will be used to increase the participation of people who might otherwise go uncounted in Census 2000. For example, there will be a special short form used in the Be Counted program, for people who did not receive a form in the mail or believe they were not included in a mailback questionnaire. There will also be special forms used to count people in living situations that require special operations, such as dormitories, nursing homes, and military bases.

C. Address List Development

In order to mail out questionnaires and control the collection and tabulation of Census 2000 data, the Census Bureau will identify all living quarters in the country and locate them with respect to the geographic areas for which census data are reported. The Bureau will accomplish this by creating a Master Address File (MAF) that identifies all living quarters and locates those addresses in its geographic database called TIGER (Topologically Integrated Geographic Encoding and Referencing). The building and maintenance of the MAF and TIGER involve partnerships with other federal agencies, state, local, and tribal governments, regional and metropolitan planning agencies. The Bureau will create and maintain the MAF through a series of operations that are determined by whether the area involved consists predominantly of city-style addresses or non city-style addresses.

The MAF for **city-style addresses** is created by combining addresses from the Census Bureau's 1990 Census Address Control File with addresses in the U.S. Postal Service (USPS) Delivery Sequence File. Each address is then located in the TIGER database. If an address cannot be located, the location is researched and resolved through an office or field operation or through assistance from local partners. For Census 2000, two additional operations will be implemented to improve the quality of the MAF for city-style addresses:

- *100 percent block canvass:* The first is a 100 percent block canvass to ensure consistently good address coverage in the MAF and to ensure correct geographic locations for all addresses. Census enumerators will canvass every road and street in areas of city-style addresses looking for every place where people live or could live, and compare the address of each living quarters with the addresses on the Census 2000 address list. As block canvassing is completed, the Bureau will data-capture the address updates

in a keying operation and will enter the updated map information into the TIGER database. The MAF will be updated with the results of the block canvassing in time to use the updated address information for delivery of questionnaires.

- *Postal Check:* The Bureau will also add a Postal Check in which USPS letter carriers will be asked to validate the addresses in the MAF, identifying and adding addresses that are missing. This postal validation to be conducted close to Census Day will help ensure that new construction and previously missed units are added to the MAF. The Bureau is planning an additional procedure that will provide an update of newly constructed units just prior to Census Day.

The MAF for **non city-style** addresses (for example, a post office box or rural route number), will be created through a door-to-door canvass by Census enumerators who will identify each structure and locate it on census maps. The completed address listings and their map locations will be recorded in digital format and added to the MAF and TIGER databases, respectively. Before conducting the door-to-door canvassing, the Bureau will work with local and tribal government partners to update the streets and roads in the TIGER database, especially high-growth areas and areas that have new street names. This list will be updated again just prior to Census Day when enumerators deliver questionnaires for households to mail back.

As a result of legislation enacted in 1994, the Census Bureau has for the first time been allowed to have local and tribal governments review the MAF. This is done through the Local Update of Census Addresses (LUCA) program, in which the Bureau sends local or tribal government liaisons the MAF listings and corresponding maps for their areas, and a tally of MAF records for each census block in their jurisdictions. For areas with predominantly city-style addresses, liaisons began reviewing the address

lists in May of 1998 because the MAF had been created using addresses obtained from the 1990 census and the USPS. For areas of predominantly non city-style addresses, the address list will not be available for review until 1999, after the Census Bureau completes the address listing operation to create the MAF in these areas, but these areas were able to get an early start by reviewing and updating maps for their communities in early 1998. After verifying information provided by the liaisons, the Bureau will correct the MAF.

While the current LUCA program has already involved local and tribal governments more effectively than the 1990 post census local review in improving the completeness of the address list, the Bureau recognizes the need for additional input to update addresses as close as possible to Census Day. This includes the update of the streets and roads in the TIGER database. The Bureau is also planning a procedure involving local governments in identifying newly constructed housing units.

D. Geographic Database Development - TIGER

The Census Bureau's TIGER (Topologically Integrated Geographic Encoding and Referencing) system provides the geographic structure for the control of the data collection, tabulation, and dissemination operations for Census 2000. The TIGER system links each living quarter to a spatial location, each location to a specific geographic area, and each geographic area to the correct name or number and attributes. The database constantly changes, for example when new streets are built, and the names and address ranges of existing streets change. To ensure that the TIGER database is complete and correct, the Bureau works with other federal agencies, state, local and tribal governments, and other public and private groups to update both its inventory of geographic features and its depiction of the boundaries, names, and attributes of the various geographic entities for which the bureau tabulates data.

The Bureau obtains updates to the features in the TIGER system, including associated address ranges, from its various address list improvement activities; from partnership efforts like the LUCA program; from digital files provided by some local and tribal governments; and from local and tribal governments in response to a preview of the census map of their jurisdictions.

Updates to the TIGER system's depiction of the boundaries, names, and attributes of geographic entities are obtained through surveys designed to collect an accurate inventory of all functioning governmental units. The Bureau conducted annual boundary surveys in 1998 and 1999, and will conduct an additional survey beginning in November 1999 to help determine the boundaries that will be in effect on January 1, 2000, which will be the official Census 2000 boundaries for functioning governments. The Bureau also relies on other programs to update the TIGER boundaries data, including a program that allows local or tribal officials to review proposed Census 2000 boundaries; a program that allows local and tribal participants the opportunity to delineate Census 2000 participant statistical areas (block groups, census county divisions, census designated places, and census tracts); and additional programs that offer participants the opportunity to identify other areas for which the Census Bureau will tabulate data (for example, traffic analysis zones).

E. Field Offices and Staffing

The Census Bureau will open a national network of temporary offices from which employees will collect and process the data for Census 2000. Establishing the office network will require, for most offices, the leasing of office space, purchasing furniture and equipment, purchasing and installing computer hardware and software, and establishing voice and data line connections. Because the Census Bureau will be conducting 100% follow-up, it expects significant increases in field offices and staffing — as compared to the original Census 2000

Operational Plan — to meet this operational goal. The current plan for the Census 2000 office structure is:

- **12 Regional Census Centers (RCCs)** have been open since March of 1998. Through a network of Census Field Offices, the RCCs will manage all census field data collections operations, address listing, and address list enhancement for city-style address areas; coordinate the LUCA program; produce maps; update TIGER and work with local participants in the Public Law 94-171 Redistricting Data Program; and recruit temporary staff.
- **402 Census Field Offices (CFOs)** were opened in September, 1998. These offices perform the address listing; conduct local recruiting; and perform clerical review of completed field address listing work.
- **520 Local Census Offices (LCOs)**, many of which are already open, will all be open by November, 1999. These offices will produce enumerator maps and assignments; conduct local recruiting; conduct outreach and promotion; conduct group quarters and service-based enumeration activities; conduct update/leave and list/enumerate operations; conduct non response follow-up, coverage improvement follow-up, and address verifications; and perform the block canvass operations.
- **3 New Data Capture Centers (DCCs)** will be opened by September, 1999. These Centers will check in mail returns; prepare questionnaires; and conduct data capture.
- **1 National Processing Center (NPC)**, which, in addition to performing the functions of a Data Processing Center, will process address listing data; and perform coding of questionnaire data.

To conduct a successful Census 2000, the Bureau will recruit and test hundreds of thousands of

applicants for a wide range of positions, such as local census office managers, enumerators, partnership specialists, media specialists, and clerks. This will require an extraordinary recruiting effort throughout the country. Every job applicant will be required to pass a written test and will be screened for criminal history. Applicants selected for employment must take an oath of office and sign an affidavit agreeing not to disclose census information.

Many factors converge to present the Bureau with unprecedented challenges in hiring, retaining, and training the necessary employees for Census 2000. To address this challenge, the Bureau is implementing several new approaches:

- Innovative methods of setting pay and incentives;
- Expanding the potential labor force by working with other federal agencies and state agencies to reduce barriers presented by various income transfer programs, and encourage recipients of these programs to work for the Census Bureau. Consistent with these efforts, the Census Bureau has already hired more welfare-to-work employees than any other federal agency; and
- Earlier and expanded training for enumerators.

F. Data Collection: Basic Enumeration Strategy

To ensure that the Census Bureau obtains a completed questionnaire from every household, or as close to that as possible, the Census Bureau has developed a ten-part, integrated enumeration strategy.

1. The first part of this strategy will ensure that a questionnaire is delivered to every housing unit, by one of three data collection methods:
 - *Mailout/Mailback:* U.S. Postal Service will deliver questionnaires to every

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- “city-style” housing unit with a street name and house number.
- *Update/Leave:* Census enumerators will deliver questionnaires to housing units without street names and house numbers to be mailed back, mainly in rural areas, and correct and update the address list and maps for any additions or errors.
 - *List/Enumerate:* In remote and sparsely populated areas, enumerators will visit every housing unit and complete the enumeration as delivered.
2. The second part of this strategy will provide people with assistance, as needed, to complete and return their questionnaires.
- *Telephone Questionnaire Assistance (TQA):* The Bureau will operate a toll-free TQA system, in English, Spanish and several other languages, providing automated touch-tone answers to common questions, personal operator answers to those requesting it, special service for the hearing impaired to assist them in completing a short form. Callers also will be able to request a questionnaire.
 - *Internet:* Respondents will be able to access an Internet web site to both receive assistance and, in some cases, submit their responses.
 - *Questionnaire Assistance Centers:* The Bureau will open Walk-in Questionnaire Assistance Centers in convenient locations to assist respondents with filling out questionnaires in person. As a result of lessons learned in the Dress Rehearsal, bilingual staff will also be available in these centers.
 - *Questionnaire Assistance Guides:* Questionnaire Assistance Guides will be available in over 30 languages.
3. The third part of this strategy will provide a means for people who believe they have not received a questionnaire or were not included on one, to respond to Census 2000. Part of this operation will be targeted to members of historically-undercounted groups. The major element of this operation is the distribution of “Be Counted Questionnaires.” The Census Bureau will distribute these questionnaires at public locations such as Walk-In Questionnaire Assistance Centers and some public and private facilities, staffed with bilingual competencies when appropriate. These forms will be available in English, Spanish, Korean, Chinese, Vietnamese and Tagalog.
4. The fourth part of this strategy is designed to enumerate people who do not live in traditional housing units, including group quarters situations such as nursing homes and college dormitories, people living under mobile circumstances such as on boats, people at migrant farm worker camps, people living on military installations, and federal employees living overseas. Dress Rehearsal results indicate that this part of the strategy will have to be expanded because many more people do not live in traditional housing units today, as compared to 1990.
- *Group Quarters Enumeration.* This operation will identify the location of all group living quarters and make advance visits to each group quarter. Census staff will list all residents in April 2000 and distribute questionnaire packets.
 - *Transient Night Operation.* Transient Night will enumerate people living a mobile lifestyle by visiting and interviewing people

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- at campgrounds, racetracks, commercial or public campgrounds and those for recreational vehicles, fairs and carnivals, and marinas.
- *Remote Alaska Enumeration.* This operation will send out enumerators to deliver and complete questionnaires for people living in outlying or remote settlements in Alaska.
 - *Domestic Military/Maritime Enumeration.* The Bureau in cooperation with the Department of defense and U.S. Coast Guard will identify living quarters and housing units on military installations and ships assigned to a U.S. home port, and use appropriate enumeration methods.
 - *Overseas Enumeration.* The Census Bureau in cooperation with the Department of Defense and other Departments will count federal employees assigned overseas (including members of the Armed Forces) and their dependents, for apportionment purposes.
5. The fifth part of this strategy will target people with no usual residence or address. This operation is conducted at selected service locations such as shelters and soup kitchens and non-sheltered outdoor locations.
 - Regional census centers will use the planning database and their knowledge of local conditions to identify appropriate areas for targeted methods. A team of enumerators will then go to targeted areas, such as areas with high concentrations of multi-unit buildings, safety concerns or low enumerator production rates, and conduct team enumerations.
 6. The sixth part of this strategy will deploy special data collection methods to improve cooperation and enumeration in certain hard-to-enumerate areas.
 - Mail response rates and maps will be available to local and tribal officials so they can work with Bureau staff to identify low-response areas and implement additional outreach and publicity efforts and targeted enumeration efforts.
 - In partnership with local and tribal governments and community-based organizations, local census offices will establish Walk-In Questionnaire Assistance Centers in locations such as community centers, large apartment buildings to provide assistance in English, Spanish and other and foreign languages.
 - The Be Counted programs will make unaddressed questionnaires available in the Walk-In Assistance Centers and other locations.
 - Letters will be mailed to managers of large multi-unit structures and gated communities informing them of upcoming census operations.
 - In pre-identified census blocks, census enumerators will canvass the blocks, update the address list, and deliver and complete census questionnaires for all housing units.
 - In pre-identified blocks originally classified as "Mailout/Mailback," enumerators will deliver the questionnaire and update the address list (Urban Update Leave).
 7. The seventh part of this strategy, coverage-edit and telephone followup, will review completed questionnaires for potential missing, incomplete or inconsistent data.

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- *Coverage Edit.* The Bureau will check completed questionnaires for discrepancies between the number of persons reported and the number of persons for whom information is provided, forms returned where the population count is blank and the number of persons reported is six, mailed forms with household counts of seven or more, and certain households that contain complex living arrangements.
 - *Follow-up.* Telephone clerks will contact and re-interview the households with discrepancies identified after mail returns are data captured; field staff will resolve discrepancies found on enumerator returned questionnaires.
 - *Content Edit.* Computer operations will identify missing or incomplete responses to population or housing units and use statistical imputation to complete the information.
8. The eighth part of this strategy, non-response followup (NRFU), is the effort to secure a response in Census 2000 from every housing unit and resident. One hundred percent of non-responding households will be followed up.
- In the initial period, the Bureau will use reminder publicity urging people to return their questionnaires.
 - Following the period of mail response, non-responding households are identified and listed.
 - Enumerators will visit all non-responding addresses to obtain a completed questionnaire for each household.
 - In mailout/mailback areas, enumerators will also follow up 100 percent of housing units identified as nonexistent or vacant by the U.S. Postal Service.
- In update/leave areas, enumerators will follow up 100 percent of housing units where the Bureau was unable to deliver questionnaires.
 - The Bureau will conduct quality assurance checks of Non-Response Followup to ensure the completeness and accuracy of the operations.
9. The ninth part of strategy involves additional operations to improve the coverage of Census 2000.
- In mailout/mailback areas, enumerators will revisit addresses for which questionnaires were returned in NRFU reporting the housing unit as vacant or delete and which were not initially identified by the U.S. Postal Service as undeliverable as addressed.
 - In update/leave areas, enumerators will revisit addresses for which a questionnaire was returned as vacant or nonexistent in NRFU, but the questionnaire was not returned as undeliverable during the update/leave operation.
 - In both areas, mail returns checked in but not data captured will be rechecked and, if necessary, revisited.
10. The tenth part of this strategy is unduplication, which involves reviewing and selecting person information when more than one questionnaire data set is reported for a single address. Dress Rehearsal results showed that the multiple ways in which people can respond to the census increases the possibility of more than one response being submitted for a given person or household. Automated matching

technologies will allow us to resolve situations where more than one form was received for an address.

G. Special Populations

1. American Indian and Alaska Native Areas and Hawaiian Homelands

The Census Bureau will base its strategy for enumerating the populations in the American Indian, Alaska Native Areas (AIANA) and Hawaiian Homelands on building partnerships for:

- *Address List Development:* The Census Bureau will use U.S. Postal Service (USPS) Delivery Sequence Files in AIANA and Hawaiian Homelands where there are city style addresses. In other areas, the Census enumerator will use the “update/leave” method where a form is left with the respondent for return by mail. In more remote areas, the census enumerator will actually deliver the form and conduct the census interview all in one visit. Tribal governments will have an opportunity to participate in the LUCA program. The Census Bureau will work with tribal officials to select the appropriate data collection methodology for each area.
- *Geographic Programs:* There are many programs available to review and define geographic areas.
- *Marketing:* Census Bureau staff and tribal liaisons will compile lists of available media for paid advertising and promotion. The Census Bureau will also enlist the help of tribal liaisons and locally-established “Complete Count Committees” to assist with promotional activities.
- *Field Operations:* The Census Bureau will work with tribal governments to assist in all

levels of field operations including training local staff in cultural awareness, assisting in recruiting efforts, and identifying locations for census questionnaire assistance centers.

- *Data Dissemination:* While most data will be processed in the same way as data for the rest of the nation, the Census Bureau will work with tribal governments to meet their data needs.

2. Puerto Rico

The Census 2000 operations in Puerto Rico will be comparable to activities in the 50 states and the District of Columbia. The Census Bureau is working in partnership with the government of Puerto Rico to ensure that Census 2000 data meet the federal legal requirements.

- *Build Partnerships at Every Stage of the Process:* The Census Bureau entered a Memorandum of Agreement with the governor of Puerto Rico which outlines mutual roles and responsibilities. In consultation with the government of Puerto Rico, Census questionnaire content was developed to meet the legislative and programmatic needs of Puerto Rico. A separate advertisement and promotion campaign will be conducted in Puerto Rico to build awareness of the Census and boost participation. Address list development will allow Puerto Rico to participate in the LUCA program.
- *Census Questionnaires:* Census questionnaires and other forms will be readily available in both Spanish and English and will be placed in Walk-in Questionnaire Assistance Centers and other locations identified through consultation with local partners.

- *Use of Technology:* The Census Bureau will make use of the same technological advances that will be used in the fifty States and the District of Columbia. Many operations performed clerically in 1990 will be automated. A re-engineered method of producing the address list and integrating it with the geographic database will improve the quality of the files. Telephone follow-up and coverage improvements will focus efforts where the potential for coverage improvement is greatest. Data users will have access to Census 2000 data and products through the Internet using the American FactFinder system.
- *Special Techniques to Improve Coverage:* The "Update/Leave" methodology for census data collection will be used for the first time in Puerto Rico. Census enumerators will be able to update the MAF for Puerto Rico while delivering questionnaires. Respondents have the opportunity to complete the Census questionnaires themselves and return them by mail. Expanding the marketing and promotion program, the telephone assistance program and other enumeration support activities will address lessons learned in 1990.

3. Island Areas

The Census 2000 operations in American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands (collectively referred to as the "Island Areas") will be conducted by the Census Bureau in partnership with the government of each Island Area. These partnerships will ensure that Census 2000 data meet federal legal requirements, as well as the specific needs of each Island Area. The Census 2000

operations in the Island Areas will be built around the following:

- *Data Collection:* Data collection in the Island Areas will use the list/enumerate method. This decision is based on recommendations from Island representatives and an analysis of the various data collection methodologies. Unlike stateside list/enumerate procedures, the Census Bureau will deliver Advance Census Reports before the list/enumerate operation and ask respondents to complete the form and hold it for the enumerator to pick up.
- *Build Partnerships at Every Stage of the Process:* The Census Bureau will develop and sign a Memorandum of Agreement with the governor of each Island Area that will outline mutual roles and responsibilities. In consultation with the government of the Island Areas, census questionnaire content was developed to meet the legislative and programmatic needs of each Island Area. A separate advertisement and promotion campaign will be developed for each Island Area to build awareness of the Census and boost participation.
- *Census Questionnaires:* Census questionnaires and other forms will be readily available to respondents in convenient locations identified through consultation with local partners.
- *Use of Technology:* The Census Bureau will make greater use of the telephone to provide assistance to respondents with questions about Census 2000. Data users will have access to Census 2000 data and products through the Internet using the American FactFinder system.

H. Telecommunications Support and Automated Data Processing

- Using dedicated links and other secure lines, the Census 2000 telecommunications network will link all census offices including, under current plans: Census Headquarters in Suitland, MD, the 520 Local Census Offices (LCOs), the 12 Regional Census Offices (ROO), the 12 Regional Census Centers (RCCs), the Puerto Rico Area Office, the Maryland Computer Center in Bowie, the National Processing Center (NPC) in Jeffersonville, Indiana and the three contracted Data Capture Centers (DCC) in Phoenix, AZ, Pomona, CA, and Essex, MD. The Census Bureau will also establish communications links with planned commercial telephone centers to assist with Telephone Questionnaire Assistance and coverage edit follow-up.
- The use of electronic imaging will reduce the logistical and staffing requirements of handling large volumes of paper questionnaires. Some components of data capture will be better performed by private-sector partners. Census will also use commercially available advanced hardware and software rather than limiting itself to creating in-house solutions.
- The most significant features of the Data Capture System include: 1) work divided among four centers; 2) full electronic imaging and processing of questionnaires; 3) automated sorting of mailed responses; 4) optical mark recognition for check-box data; 5) optical character recognition for write-in data with automated processes to resolve difficult cases; and 6) quality assurance checks.

I. Dissemination and Products

Census 2000 data will be disseminated mainly using a new data retrieval system called the **American FactFinder**, which will provide an interactive system

that enables data users to access prepackaged data products, data documentation, and online help, as well as build custom data products online and offline. The first version of American FactFinder will be available for limited use in early 1999. Census 2000 data products will be available beginning January 2001. American FactFinder will be accessible to the widest possible array of users through the Internet, Intranet, and all available intermediaries, including the nearly 1,800 State Data Centers and affiliates, the 1,400 federal Depository Libraries, universities, and private organizations.

The Bureau has solicited the advice and recommendations of data users throughout the planning, design, and testing stages of the American FactFinder, and will continue to do so to address issues such as the types of data to be predefined in the American FactFinder and included in various data products.

The P.L. 94-171 Redistricting Data Program will assure that the Bureau meets its statutory obligation to provide redistricting data to the states within one year after Census Day. This program will consist of:

- *Phase 1, The Block Boundary Suggestion Project*, which offers state redistricting officials the opportunity to suggest visible features to use as Census 2000 block boundaries.
- *Phase 2, The Voting District Project*, in which state officials may suggest the boundaries of voting districts and state legislative districts using whole census blocks.
- *Phase 3, Release of Census 2000 Redistricting Data*, in which the Bureau works with state officials to follow up on Phase 1 and Phase 2 before releasing the data to the governor and majority and minority legislative leaders in each state.

The Census Bureau will also provide **geographic data products** for data users. The products

planned for Census 2000 are maps in digital and hard copy form, and TIGER extracts in digital form.

J. Testing, Dress Rehearsal, Evaluation and Research

Census 2000 has incorporated ambitious testing, evaluation and research operations to ensure the most accurate results possible. Virtually all potential operations and procedures included in census 2000 have been subject to extensive testing, research and evaluation, beginning even before the 1990 Census and continuing through the present period. At mid-decade, the 1995 Census test provided an additional opportunity to test many features proven successful in earlier tests and research. In addition, the census 2000 Dress rehearsals tested the various operations, procedures and questions for Census 2000 under as near census-like conditions as possible.

In addition, the plan for Census 2000 includes several other operations to ensure the most accurate results. The most important of these elements will be the *Accuracy and Coverage Evaluation (ACE)*. The Census Bureau will conduct an extensive ACE, corresponding to the Post Enumeration Survey (PES) in past censuses and the Integrated Coverage Measurement in the original Census 2000 plan, to measure and correct the overall and differential coverage of the U.S. resident population in Census 2000. The ACE sample will consist of approximately 300,000 housing units, and like the PES in prior censuses will use regional groupings to generate corrected counts. Before the census, the Bureau will conduct an independent listing of the housing units in the blocks chosen for the ACE sample. These housing units will be matched to census housing units for the same blocks. The resulting final list will be used to interview people at each households. The list of people enumerated from the interviews will be matched to the Census 2000 results and the differences will be reconciled. The differences will provide a detailed evaluation of

the completeness of Census 2000. The ACE will not be used to adjust the census figures for reapportionment purposes; however, it will be made available to federal agencies and state and local governments for other purposes.

Other operations included in the Census 2000 plan to ensure more accurate results are:

- *Quality Assurance (QA) Activities:* The Bureau will detect and correct performance errors than can affect coverage and data quality.
- *Demographic Analysis:* The Bureau will use independent estimates to evaluate the completeness of coverage, ensure the demographic consistency of the census data., and validate the ACE results.
- *Evaluation Program:* The Bureau will evaluate the quality of census 2000 data to help planning for future censuses. Evaluation results will be released in a Report card on census 2000 by March 31, 2001.
- *Research and Experimentation Program:* The census Bureau will conduct a program of research and experimentation during Census 2000 to provide information for planning the 2010 Census.
- *Administrative Records:* The Bureau will explore the feasibility of using administrative records to supplement existing data collection methods in future censuses.
- *2010 Census Planning:* The Bureau will conduct long-range planning and design activities for the 2010 Census.